CLAIMS

1. A porous film possessing at least two surfaces and containing a plurality of connected pores, wherein the porous film

(1) consists essentially of poly(metaphenylene isophthalamide),

(2) has an open area of 20-70% on both of two surfaces of the porous film,

(3) has a difference 0-40% in the open areas of two surfaces,

(4) has a mean pore size of 0.1-10 μm on both of two surfaces, and

(5) has a porosity of 30-90%.

2. A porous film according to claim 1, wherein a water permeability is 0-300 sec/μL for penetration from at least one surface.

3. A porous film according to claim 1, wherein the difference in the open areas of two surfaces is 0-20%.

4. A porous film according to claim 1, wherein a heat of fusion is 10-80 J/g as measured by DSC at 10° C/min.

5. A porous film according to claim 4, wherein a heat shrinkage is 0-0.7% upon treatment at 260° C for 10 minutes.

6. A porous film according to claim 1, which has a thickness of 5-100 μm.

7. A porous film according to claim 1, which contains substantially no inorganic salt.

8. A porous film according to claim 1, wherein a value of a gas permeability measured according to JIS P8117 is 0-3600 sec/100 cc.

9. A process for producing a porous film which is a production process for a porous film possessing at least two surfaces and containing a plurality of connected pores, wherein a polymer solution containing poly(metaphenylene

isophthalamide) and an amide solvent is subjected to the following steps (i) to (iv) in order:

(i) a casting step of casting onto a support,

(ii) a dipping coagulation step wherein the cast solution layer is dipped in an amide coagulating solution containing a substance which is non-compatible with poly(metaphenylene isophthalamide) for coagulation of the cast solution layer,

(iii) a washing and releasing step wherein the coagulated layer obtained in the previous step is washed and released, or released while washing from the support, and

(iv) a heat treatment step wherein the washed and released coagulated layer is heat treated.

10. A process for production of a porous film according to claim 9, wherein the support surface is subjected to rubbing treatment before the polymer solution is cast onto the support.

11. A process for production of a porous film according to claim 10, wherein the pressure for rubbing treatment which is applied onto the support is 10-1000 g/cm^2.

12. A process for production of a porous film according to claim 9, wherein step (ii) is followed by a step of dipping in the amide coagulating solution with the cast solution layer in a coagulated state and then heat treatment, for crystallization of the coagulated layer.

13. A process for production of a porous film according to claim 12, wherein the coagulated layer is caused to shrink 5-30% in terms of area ratio in the crystallization step.

14. A process for production of a porous film according to claim 9, wherein the polymer solution also contains, as additives, a polyhydric alcohol substance and/or a C5-19 hydrocarbon which is soluble in the amide coagulating solution.

15. A process for production of a porous film according to claim 9, wherein the amide coagulating solution comprises N-methyl-2-pyrrolidone and water which is incompatible with poly(metaphenylene isophthalamide), and the N-methyl-2-

pyrrolidone constitutes 50-80 wt% of the total amide coagulating solution.

16. A process for production of a porous film according to claim 9, which involves at least one action selected from the group consisting of rubbing treatment according to claim 10, use of additives according to claim 14 and a crystallization step according to claim 12.

17. An electronic package substrate comprising a porous film according to claim 1 as the core material.

18. Use of a porous film according to claim 1 as the core material for an electronic package substrate.